

DIGITAL OUTPUT MEMS PRESSURE SENSOR AND METHOD

Abstract of the Disclosure

[0045] A method and pressure-sensor system provide a digital-frequency output linearly proportional to a sensed pressure. The system comprises a MEMS pressure-sensing element to provide a pressure-sensing output and voltage-to-frequency converter provide the digital-frequency output. The pressure-sensor system may also comprise an amplifier to provide an output voltage linearly proportional to the pressure. A temperature sensor and temperature-compensation circuitry provide a temperature-compensation signal to the amplifier to at least partially offset the effects of temperature on the system. Some embodiments of the present invention comprise a microcontroller system comprising a microcontroller and an RF transmitter. The microcontroller may receive the digital-frequency output and may generate a notification signal when the sensed pressure is inside or outside a predetermined pressure range. The RF transmitter may transmit an RF signal to indicate that the sensed pressure is inside or outside the predetermined pressure range.